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From Gunboat to Garbage Can: The Conservation of a Cannonball *Part 4*

By Ashley Deming, Maritime Archaeologist, SDAMP Manager

The cannonball has now been through ten full months of electrolysis. We are hoping that these next few months will be the last that the cannonball will have to undergo this conservation technique. In February or March, we hope to finish off the conservation of the ball outside of the tank.

We did have to replace the steel components in the tank during the last three month period as they were too corroded to continue to produce enough charge for the circuit. Once replaced, we were once again able to continue the process without too much trouble.

In December, SDAMP intern, Mike Slot and I removed the ball from the solution for its three-month cleaning and solution

change. We remixed the sodium carbonate and water solution in our tank and let it settle while we worked with the ball.

Mike and I worked using dental tools to carefully remove any of the active corrosion from the cannonball's surface as well as the pits and holes (Figure 1). There are a few more pits in the ball's surface than there was during the last cleaning interval. Some of these are as deep as 1 inch toward the center of the ball. There is also a small amount of additional corrosion in the existing pits. All active corrosion must be removed to prevent further corrosion later.

Although there is certainly more corrosion happening and pits forming (Figure



Figure 1
Intern Mike Slot cleaning cannonball for its 10-month cleaning

2), the overall stability of the ball is greatly improved. We had very little sloughing off the surface of the ball and not much new corrosion in the preexisting pits and holes. What this leads us to believe is that the ball is slowly becoming more and more stable and the conservation process is working.

The pits and holes do not make us happy, but we are

dealing with a 200-year-old artifact that was submerged in a brackish environment. It isn't going to be perfect. We will continue to consult with experts regarding the conservation of the ball, so we are able to do everything we can to conserve as much of the ball as possible. We are hoping for the best possible outcome and are confident we will achieve it. ■

(Photos of stages on page 12)



Figure 2
New pitting and holes



Figure 3
Deep holes must be cleaned to prevent further corrosion



**After initial
corrosion removed**



**After 1-month
cleaning**



**After 4-month
cleaning**



**After 7-month
cleaning**



**After 10-month
cleaning**

Welcome Aboard!

Hello Divers!

By Mike Slot, Intern, SDAMP

My name is Mike Slot and I am the newest member of the SDAMP crew. I will be filling the internship role at the SDAMP office here in Charleston. Like most of you, I like looking for cool stuff underwater. My educational background includes a bachelor's degree in anthropology with a strong focus in underwater archaeology as well as a historical archaeology field school in Nevada searching for evidence of a 19th

century opera house. I recently moved here to Charleston from Michigan where I did my undergraduate work at Grand Valley State University. So far it's been great (I'm pretty sure it's snowing back home). My areas of interest include pretty much anything that can be associated with history or the water, to quote Clive Custer "If it's old, I'm into it." Prior to this internship, I worked at the Great Lakes Naval Memorial

and Museum in Muskegon, Michigan. There, I helped conduct submarine surveys with Remote Operated Vehicles or ROVs. I was also part of a team working to design the ROV institute, an afterschool program for junior high students that encourages kids to design, build and operate their own ROV. My goal is to one day go to graduate school for underwater archaeology. I love the water, love the ocean,

and I'm excited to be here in Charleston working with SDAMP. I am looking forward to meeting and diving with you come spring! ■



SC State Museum Welcomes New Curator

By Dave Cicimurri, Chief Curator of Natural History, South Carolina State Museum

My name is Dave Cicimurri and I'm the Natural History Curator at the South Carolina State Museum (SCSM) in Columbia. Although I'm new to the State Museum, I've been studying the geology and fossil record of the

state since arriving here from South Dakota in 1999. Over the past 12 years I've had opportunities to explore our state from east to west, north to south, and everywhere in between. I'm constantly amazed at the geological

and paleontological diversity here, and the more I dig, the more I learn. I've only scratched the surface (no pun intended) when it comes to deciphering our state's ancient history.

My focus has

been on tracing changes in environment and species composition over the past 75 million years. Did you know that the Florence area was a complex delta system where dinosaurs roamed the shorelines, crocodiles lurked in the

(Continued on page 12)